

probe 5 extends in a direction parallel to the polarization plane of the horizontally polarized wave, and that of the second probe 6 extends in a direction parallel to the polarization plane of the vertically polarized wave.

Please rewrite the paragraph beginning on page 6, line 18 and ending on page 7, line 15 as follows:

(Amended) In the preferred converter for satellite communication, when orthogonal bipolarized signals transmitted from a satellite are received within the waveguide 1 through the horn 1c, the horizontally polarized wave is reflected by the short-circuit rod 3 toward the first propagation path 1a to the first waveguide 2a, and reflected by an innermost wall of the first waveguide 2a to be detected by the first probe 5. On the other hand, the vertically polarized wave passes the short-circuit rod 3 to proceed from the second propagation path 1b to the second waveguide 2b, and is reflected by an innermost wall of the second waveguide 2b to be detected by the second probe 6. The horizontally polarized signals detected by the first probe 5 and the vertically polarized signals detected by the second probe 6, after undergoing frequency conversion into IF signals by the converter circuit on the circuit substrate 4, are outputted via output terminals (not shown) provided on the case 2. Therefore, the orthogonal bipolarized waves, comprising the horizontally polarized wave and the vertically polarized wave, are coupled in the waveguides 2a and 2b of the case 2 to their respective probes 5 and 6. Preferably, the signals detected by probes 5 and 6 can be amplified and synthesized on the same circuit substrate 4, which significantly reduces signal losses and interference and simplifies the input structure of the waveguides.

Please rewrite the paragraph on page 7, lines 16-19 as follows:

(Amended) Fig. 4 shows a plan view of a preferred case provided in a second preferred embodiment; Fig. 5, a sectional view taken along line 5-5 in Fig. 4, and Fig. 6, a section along line 6-6 in Fig. 4.

Please rewrite the paragraph beginning on page 7, line 20 and ending on page 8, line 4 as follows:

(Amended) In a second preferred embodiment, the circuit substrate 4 is comprised of electroconductive patterns as first and second probes 7 and 8 are partially enclosed by short caps 9 and 10 comprising an electroconductive metallic

material. Preferably, the electroconductive metallic material provides reflective faces for the two probes 7 and 8 that are fitted to the circuit substrate 4 by soldering or other joints. Further, within the case 2, the two waveguides 2a and 2b are preferably bent or inclined at a right angle relative to the short caps 9 and 10, respectively, and the tip of the first probe 7 extends into a hollow area surrounded by the first waveguide 2a and the short cap 9, while that of the second the probe 8 extends into a second hollow area surrounded by the second waveguide 2b and the short cap 10.

[Please rewrite the paragraph on page 8, lines 5-15 as follows:]

(Amended) In the second embodiment of the invention, a horizontally polarized wave entered from the first propagation path 1a into the first waveguide 2a travels within the first waveguide 2a toward the circuit substrate 4 and is reflected by the short cap 9 toward the first probe 7 on the circuit substrate 4. Preferably, the horizontally polarized wave is detected by the first probe 7. On the other hand, a vertically polarized wave entering the second propagation path 1b into the second waveguide 2b travels within the second waveguide 2b toward the circuit substrate 4, and is reflected by the short cap 10 to the second probe 8 on the circuit substrate 4. Preferably, the vertically polarized wave is detected by the second probe 8.

[Please rewrite the paragraph on page 8, lines 16-19 as follows:]

(Amended) Fig. 7 shows a plan view of a case provided in a third preferred embodiment; Fig. 8 shows a sectional view taken along line 6-6 in Fig. 7, and Fig. 9 shows a sectional view taken along line 9-9 of Fig. 7.

[Please rewrite the paragraph beginning on page 8, line 20 and ending on page 9, line 2 as follows:]

(Amended) In the embodiment, the L-shaped pin members are supported by the circuit substrate 4 as first and second probes 11 and 12 and a ground pattern 13 provided on the surface of the circuit substrate 4 is used as the reflective face for the two probes 11 and 12. Thus, within the case 2, the two waveguides 2a and 2b are bent or inclined at a right angle relative to the circuit substrate 4, and the tip of the first probe 11 extends into the first waveguide 2a, while that of the second the probe 8 extends into the second waveguide 2b.

[Please rewrite the paragraph on page 9, lines 3-13 as follows:]

(Amended) In a third embodiment, a horizontally polarized wave entered from the first propagation path 1a into the first waveguide 2a travels within the first waveguide 2a toward the circuit substrate 4 and is reflected by the ground pattern 13 toward the first probe 11 in the first waveguide 2a. Preferably, the horizontally polarized wave is detected by the first probe 11. On the other hand, a vertically polarized wave entered from the second propagation path 1b into the second waveguide 2b travels within the second waveguide 2b toward the circuit substrate 4, and is reflected by the ground pattern 13 toward the second probe 12 in the second waveguide 2b. Preferably, the vertically polarized wave is detected by the second probe 12.

[Please rewrite the paragraph on page 9, lines 14-25 as follows:]

(Amended) Fig. 10 shows a sectional view of a case provided in a fourth preferred embodiment. In this embodiment, both waveguides 2a and 2b are substantially straight and the circuit substrate 4 is arranged in an orthogonal direction to the axial centers of the waveguides 2a and 2b. Thus, the tip of the first probe 11 having an L-shaped pin member extends into inside the first waveguide 2a, while that of the second probe 12 also having an L-shaped pin member extends into inside the second waveguide 2c. Preferably, the ground pattern 13 overlies a portion of the surface of the circuit substrate 4.

Please rewrite the paragraph beginning on page 9, line 26 and ending on page 10, line 9 as follows:

(Amended) In the fourth preferred embodiment, a horizontally polarized wave entered from the first propagation path 1a into the first waveguide 2a proceeds straight in the first waveguide 2a and is reflected by the ground pattern 13 overlying a portion of the surface of the circuit substrate 4 toward the first probe 11 of the first waveguide 2a. Preferably, the horizontally polarized wave is detected by the first probe 11. On the other hand, a vertically polarized wave entered from the second propagation path 1b to the second waveguide 2b proceeds straight in the second waveguide 2b and is also reflected by the ground pattern 13 toward the second probe 12 in the second waveguide 2b. Preferably, the vertically polarized wave is detected by the second probe 12.

[Please rewrite the paragraph on page 10, lines 10-15 as follows:]